

COPPER ALLOY VIA BOTTOM LINER

Abstract

Improved mechanical and adhesive strength and resistance to breakage of copper integrated circuit interconnections is obtained by forming a copper alloy in a copper via/wiring connection in an integrated circuit while minimizing adverse electrical effects of the alloy by confining the alloy to an interfacial region of said via/wiring connection and not elsewhere by a barrier which reduces or substantially eliminates the thickness of alloy in the conduction path. The alloy location and composition are further stabilized by reaction of all available alloying material with copper, copper alloys or other metals and their alloys.